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### LAND BIRDS AT MONKEY MIA, PERON PENINSULA, WESTERN AUSTRALIA 1985-1987

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## INTRODUCTION

The terrestrial flora and fauna of the Shark Bay region are of special biogeographical and conservational interest. The South West and the Eremaean Botanical Provinces meet here; the region represents the northern and southern limits for some animals, and its numerous islands and peninsulas are important refuges for several rare species. Davies and Chapman (1975) and Storr (1985) have summarised what is known of its avifauna. This paper presents further information obtained during 11 visits over a three-year period on land birds at Monkey Mia on the eastern coast of Peron Peninsula.

## STUDY AREAS AND METHODS

A 40 ha study site was established in 1985 to study Thick-billed Grasswrens *Amytornis textilis* adjacent to the Monkey Mia Caravan Park (25°48'S, 113°43'E). Three vegetation elements were represented: coastal dune, coastal white sandplain and red sandplain, and these are described and mapped by Brooker (1988). The area has a low rainfall characterised by fairly reliable winter rains with occasional heavy summer rains e.g. February 1986.

The dates of visits were:

1985: 26-31 Jan., 17-24 Apr., 24-31 Jul., 27-30 Aug., 1-3 Oct.

1986: 6-10 Jan., 20-28 May, 5-13 Aug., 28 Aug.-2 Sept.

1987: 12-17 Jan., 10-13 Aug.

As well as recording species present on each visit, mist-nets were set on the site systematically in April and July 1985, and May 1986, and opportunistically during other visits. In all, 318 birds representing 25 species were netted. Of these, 248 birds of 19 species were colour-banded.

## RESULTS

No Emus, *Dromaius novaehollandiae*, were seen in the area but old faeces were recorded in July 1985. P. Curry (pers. comm.) recorded a male with three c. 4 month old chicks on Peron Peninsula in November 1982.

Diurnal raptors were scarce apart from Australian Kestrels, *Falco cenchroides*, which were seen during all visits. An Osprey, *Pandion haliaetus*, was recorded in July 1985, Collared Sparrowhawks, *Accipiter cirrhocephalus*, in April 1985 and May 1986, White-bellied Sea-Eagles, *Haliaeetus leucogaster*, in May 1986 (one juvenile, one adult) and August 1986 (one adult), Wedge-tailed Eagles, *Aquila audax*, in August 1986 and Little Eagles, *Hieraaetus morphnoides*, in January 1985 and May and August 1986.

A large quail was observed in April 1985 and several were seen during January 1987 in swampy areas on the white sandplain. A single Banded Lapwing, *Vanellus tricolor*, was seen in July 1985.

Common Bronzewing, *Phaps chalcoptera*, were present during most visits and Crested Pigeons, *Ocyphaps lophotes*, were numerous on all visits in flocks up to 14.

Only three species of parrots were recorded. A small flock (3-4) of Galahs, *Cacatua roseicapilla*, was present on six of the 11 visits, with a flock of 10 in August 1986. No sightings were made during the three January visits. Three Regent Parrots, *Polytelis anthopeplus*, were seen feeding on mistletoe fruit on 28 May 1986, and a flock of 20 was recorded later on the same day. One flock of Budgerigars, *Melopsittacus undulatus*, was observed in January 1985. Wilf Mason of the Caravan Park reported small green parrots (*Neophema* sp.) in the coastal dunes prior to January 1985.

Pallid Cuckoos, *Cuculus pallidus*, were recorded only in August 1985. Two Black-eared Cuckoos, *Chrysococcyx osculans*, were present in May 1986 and one was netted. Horsfield's Bronze-Cuckoos, *Chrysococcyx basalis*, were seen in July and August 1985, and January and August 1986, and successfully parasitised two pairs of Thick-billed Grasswrens in August 1986.

A Tawny Frogmouth, *Podargus strigoides*, was seen in April 1985 and Australian Owlet-nightjars, *Aegotheles cristatus*, were heard in August 1985.

Four Fork-tailed Swifts, *Apus pacificus*, were seen at Monkey Mia on 19 April 1985. White-backed Swallows, *Cheramoeca leucosternum*, usually single birds, were seen in July and August 1985, August 1986 and January 1987. Welcome Swallows, *Hirundo neoxena*, and Tree Martins, *Cecropis nigricans*, were present on all visits.

Richard's Pipits, *Anthus novaeseelandiae*, were numerous on the coastal dunes and beach but were recorded only twice on the red and white sandplains.

Black-faced Cuckoo-shrikes, *Coracina novaehollandiae*, were present during two visits (May and August 1986). White-winged Trillers, *Lalage sueurii*, were recorded on two days of the July 1985 visit.

Southern Scrub-robins *Drymodes brunneopygia* were always present and, although nine were netted, some unbanded birds were seen during each visit. The longest distance between sightings of one marked individual was 400 m. Red-capped Robins, *Petroica goodenovii*, were seen in April and July 1985 and a pair of Hooded Robins, *Melanodryas cucullata*, was present in January 1987. Rufous Whistlers, *Pachycephala rufiventris*, were scarce — they were not heard calling and no adult males were recorded. Three were netted in April 1985, one in May 1986 and a single bird was seen in August 1986. Storr (1985) reported that this species is 'casual' on the Peninsula in

winter. Grey Shrike-thrushes, *Colluricincla harmonica* were recorded during most visits and five were colour-banded. Grey Fantails, *Rhipidura fuliginosa* were seen on three visits in 1985 (April, July and August) and in August 1987. Five Willie Wagtails, *Rhipidura leucophrys*, were colour-banded and two individuals were re-sighted, three and five months after capture. This species was always present and unbanded birds were seen on each trip. A nest, ready for eggs, was found on 8 August 1986 and two nests, each containing three nestlings, on 10 August 1987. Chiming Wedgebills, *Psophodes occidentalis*, were numerous (18 were colour-banded), especially on the red sandplain and were observed carrying nest material in early August 1986.

White-browed Babblers, *Pomatostomus superciliosus*, were found on both red and white sandplain. Twenty-six individuals were colour-banded and there appeared to be about 40 birds in four groups on the study area. The median distance between re-sightings of banded birds was 210 m ( $n=19$ ). Nests containing eggs and nestlings were found in August 1985 and 1986.

Variiegated and White-winged Fairy-wrens, *Malurus lamberti*, and *M. leucopterus*, occurred throughout the study area, although White-winged Variiegated was seen on 13 January 1987 and a nest with two chicks was found in August 1987. A White-winged was nest-building on 8 August 1986.

Some aspects of the biology and conservation of Thick-billed Grasswrens in the Shark Bay region are given in Brooker (1988). They were numerous (>2 birds per ha) at Monkey Mia, were found in all habitats, even feeding on the beach and they nested successfully within 100 m of the Caravan Park.

White-browed Scrubwrens, *Sericornis frontalis*, were the most numerous avian species on the study area, rivalled only by Grasswrens and Singing Honeyeaters. During the systematic mist-netting in April and July 1985 and May 1986, 55 individuals were captured. As the population still contained some unbanded birds, the minimum estimate of density was 3.1 per ha which is higher than that reported by Ambrose (1985) on nearby Hamelin Station ( $26^{\circ} 25'S$ ,  $114^{\circ} 15'E$ ; 0.4-2.3 birds/ha) but was within the ranges he found at more mesic sites at Eyre ( $32^{\circ} 15'S$ ,  $126^{\circ} 20'E$ ; 1.7-5.3 birds/ha) and Rockingham ( $32^{\circ} 20'S$ ,  $115^{\circ} 55'E$ ; 1.4-4.8 birds/ha). The body weights of black-lored (males) and brown-lored (females and juveniles) birds are shown in Table 1. The sample of birds caught in April 1985 was significantly lighter in weight than those in July 1985 and May 1986, as were Grasswrens (Brooker 1988). The Scrubwrens weighed at Monkey Mia (Table 1) tended to be heavier than those recorded at Hamelin (males  $10.2 \pm 0.9$  gm; females  $10.0 \pm 0.9$  gm) by Ambrose (1985). However there was no difference between the two populations in measurements of folded wing or tail. For males at Monkey Mia, mean folded wing length was  $52.8 \pm 1.3$  mm ( $n=26$ ) versus  $52.4 \pm 3.0$  mm ( $n=42$ ) on Hamelin, tail length was  $49.5 \pm 1.4$  mm ( $n=22$ ) versus  $48.6 \pm 5.2$  mm ( $n=70$ ). The median for the maximum distance between retraps and/or re-sightings for black-lored birds ( $n=10$ ) was 200 m (range 50-310) and for brown-lored ( $n=13$ ), 200 m (range 90-400). Nestlings and fledglings were found in early August 1986 and 1987.

Table 1. Body weights for White-browed Scrubwrens at Monkey Mia.

DATE	BLACK LORES		BROWN LORES	
	n	$\bar{x} \pm s.e.$	n	$\bar{x} \pm s.e.$
April 1985	19	10.3 $\pm$ 0.4	11	9.6 $\pm$ 0.4
July 1985	6	11.1 $\pm$ 0.3	9	10.2 $\pm$ 0.6
Jan. 1986	2	10.6	1	10.5
May 1986	9	11.2 $\pm$ 0.5	8	10.4 $\pm$ 0.4
Aug. 1986	2	11.2	1	10.9
Nov. 1986	4	10.6 $\pm$ 0.5	—	—
TOTAL	42	10.7 $\pm$ 0.6	30	10.1 $\pm$ 0.6

One Calamanthus, *Sericornis fuliginosus*, was recorded on the white sandplain adjacent to coastal dunes in August 1985. A single bird netted in April 1985 was the only record for the Western Gerygone, *Gerygone fusca*. Inland Thornbills, *Acanthiza apicalis*, were found in all habitats. Eight were netted and three recaptured. The median distance between re-sightings was 180 m ( $n=8$ ), and the maximum distance travelled was 310 m. A bird was seen carrying food on 5 August 1986. One or more birds consistently and expertly imitated the calls of Horsfield's Bronze-Cuckoo in May 1986, a time when the cuckoos were not recorded.

The Singing Honeyeater, *Lichenostomus virescens*, was the only honeyeater always present on the study area. In all, 48 were colour-banded but only five were re-sighted on subsequent trips. A nest with two eggs was found on 6 August 1986 and fledglings were seen in January 1986 and 1987. Only one Spiny-cheeked Honeyeater, *Acanthagenys rufogularis*, was observed during 1985 (April) but they were present in May and August 1986, being especially numerous in May and were also present in January 1987. A Brown Honeyeater, *Lichmera indistincta*, netted in May 1986, was the only record. White-fronted Honeyeaters, *Phylidonyris albifrons*, were numerous in May 1986 (seven were netted). The only other records for this species were in January 1987. Pied Honeyeaters, *Certhionyx variegatus* were present in January, May and August 1986 and January 1987 but were numerous only in May 1986.

Two Crimson Chats, *Ephthianura tricolor*, were observed on 25 May 1986, flying north and two were present on 10 August 1987. Mistletoebirds, *Dicaeum hinundinaceum* were present in January and April 1985 and January and May 1986.

Yellow White-eyes, *Zosterops lutea*, were observed in January 1985 and August 1986 and, in both cases, appeared to be birds in transit. Silvereyes, *Z. lateralis*, were present in low numbers on most visits.

Some Zebra Finches, *Poephila guttata*, were always present, with flocks of up to 15 in May 1986. A nest was being built on 10 August 1987.

The Masked Woodswallow, *Artamus personatus*, was the only woodswallow seen — a flock on 19 April 1985, the day of the Fork-tailed Swifts.

Little Crows, *Corvus bennetti*, were seen on all trips, with a flock of 50 in May 1986. They nested on the radio-telephone mast at Monkey Mia in 1985 (July: eggs; August: 3 large nestlings), in 1986 (August: 2 nestlings)

and in August 1987 (2 large nestlings). One of the parents at this nest, probably the female, was missing its right foot but appeared to nest successfully in each year. Another nest with five eggs was found on 31 August 1986.

## DISCUSSION

Of 54 species of land birds recorded at Monkey Mia, 24 appear to be sedentary on the major habitat, red sandplain. This compares with 34 sedentary species on similar habitat (dense *Acacia* scrub) near Carnarvon (Brooker and Estbergs 1976) and at least 36 (pers. obs.) in red sandplain on Hamelin Station (26°24'S, 114°28'E). However the guild of insectivores which take some or all their prey from the ground was well represented at Monkey Mia (at least 12 species) compared with at least 16 species near Carnarvon and at least 17 on Hamelin Station.

Most of the sedentary species of birds previously known on Peron Peninsula were present at Monkey Mia. Exceptions include the Malleefowl *Leipoa ocellata* and Bush Thick-knee *Burhinus magnirostris* which have not been recorded on the Peninsula since 1943 (Davies and Chapman 1975) and the Samphire Thornbill *Acanthiza iredalei* which favours samphire flats not represented at Monkey Mia.

The Little Eagle, Regent Parrot, Budgerigar, Tawny Frogmouth, Australian Owllet-nightjar and White-winged Triller were not recorded for Peron Peninsula by Davies and Chapman (1975) or Storr (1985). The Regent Parrot sighting represented a northern extension of range from "23 km ENE of Tamala" (Storr 1985). This species appears to wander considerably from the normal range shown by Blakers *et al.* (1984) (see also Brooker *et al.* 1979; Jaensch 1986). The Yellow White-eye occurs farther south than Guichenault Point as reported by Storr (1985).

The family Psittacidae is under-represented on Peron Peninsula compared with other arid areas in Australia and this may be due to the lack of suitable nesting hollows. The only common parrot was the Galah which can nest in hollows in cliffs on the Peninsula (pers. obs., W. Mason pers. comm.). The paucity of roosting and nesting hollows probably also explains the absence of Boobooks *Ninox novaeseelandiae*.

The observations reported here illustrate the influence of relatively rare climatic events (in this case, effective summer rainfall) on the distribution and abundance of some nectarivorous and frugivorous species in this arid region. Good summer rain occurred once during the study in February 1986. In the following May at least eight species of shrubs were flowering and/or fruiting. Spiny-cheeked, White-fronted and Pied Honeyeaters were more numerous at Monkey Mia in May 1986 than on any other visit and Regent Parrots and Brown Honeyeaters were recorded only at this time.

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### BREEDING OF THE BANDED STILT IN THE WESTERN AUSTRALIAN GOLDFIELDS DURING 1986

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The few published records of breeding of the Banded Stilt, *Cladorhynchus leucocephala* indicate it nests in colonies on sandy islands or spits in large inland salt lakes, after they have filled in response to heavy rainfall. In the Goldfields region of Western Australia, breeding and attempted breeding have been recorded irregularly; records were summarised by Burbidge and Fuller (1982).

Intense rainfall throughout the Eastern Goldfields (Fig. 1) during June 1986 (Table 1) filled many saltlakes in the area, however stilt breeding was not detected until September 1986, when thousands of flightless chicks fled the receding waters. On 10 September, a flock of several hundred chicks trotted south through the town of Menzies before dispersing into bush or expiring along the roadside.

Subsequently, several visits were made to the area to locate breeding sites. Landholders in the area were also contacted in an endeavour to find breeding colonies. Many reported juvenile stilts at their dams, but none were sure of their origin.

Table 1: Rainfall (mm) from Stations around Lake Ballard, March-July 1986.

Station	Mar	Apr	May	Jun	Jul	Yearly Total	Mean Yearly Rainfall
Jeedamya	5	2	8	102	22	197	218 (1925-1986)
Menzies Post Office	16	5	9	113	25	270	239 (1986-1985)
Riverina	19	8	14	101	27	246	260 (1964-1986)

On 11th September, a trip was made to the Menzies area. Flightless chicks in small groups were observed along the main road from 28 km south to 32 km north of Menzies. Only one adult bird was seen, accompanying a group